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(71) Applicant (for all designated States except US): INCYTE
GENOMICS, INC. [US/US]; 3160 Porter Drive, Palo
Alto, CA 94304 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): POLICKY, Jen-
nifer, L. [US/US]; 1511 Jarvis Court, San Jose, CA 95118
(US). TRIBOULEY, Catherine, M. [FR/US]; 1121
Tennessee Street #5, San Francisco, CA 94107 (US).
FANG, Y., Tom [US/US]; 4230 Ranwick Court, San Jose,
CA 95118 (US). BAUGHN, Mariah, R. [US/US]; 14244
Santiago Road, San Leandro, CA 94577 (US). GRAUL,
Richard [US/US]; 682-29th Avenue, San Francisco, CA
94121 (US). KHAN, Farrah, A. [IN/US]; 333 Escuela Av-
enue #221, Mountain View, CA 94040 (US). NGUYEN,
Danniel, B. [US/US]; 1403 Ridgewood Drive, San Jose,
CA 95118 (US). PATTERSON, Chandra [US/US];
490 Sherwood Way #1, Menlo Park, CA 94025 (US).LAL, Preeti [IN/US]; P.O. Box 5142, Santa Clara, CA
95056 (US). AU-YOUNG, Janice [US/US]; 233 Golden
Eagle Lane, Brisbane, CA 94005 (US). YANG, Junming
[CN/US]; 7125 Bark Lane, San Jose, CA 95129 (US).
HAFALIA, April [US/US]; 2227 Calle de Primavera,
Santa Clara, CA 95054 (US). WALIA, Narinder, K.
[US/US]; 890 Davis Street #205, San Leandro, CA 94577
(US). DAS, Debopriya [IN/US]; 1267 Parkington Avenue,
Sunnyvale, CA 94087 (US).(74) Agents: HAMLET-COX, Diana et al.; Incyte Genomics,
Inc., 3160 Porter Drive, Palo Alto, CA 94304 (US).(81) Designated States (national): AE, AG, AL, AM, AT, AU,
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HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
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Published:

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1 August 2002For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: G-PROTEIN COUPLED RECEPTORS

(57) Abstract: The invention provides human G-protein coupled receptors (GCREC) and polynucleotides which identify and en-
code GCREC. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also
provides methods for diagnosing, treating, or preventing disorders associated with aberrant expression of GCREC.

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INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/705 C12N15/12 C12N5/10 A01K67/027 C07K16/28
C12Q1/68 A61K38/17 G01N33/53 A61K39/395 C07K1/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K A01K C12Q A61K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, EMBL, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL [Online] 22 January 2000 (2000-01-22) DUNN, M.: "Human DNA sequence from clone RP11-108P5 on chromosome 13q14.12-21.1; contains the gene for cysteinyl leukotriene CysLT2 receptor." XP002187243 Accession AL137118 (nucleotides 103990-105030) ---	1-19,22, 25-45,51
P,X	DATABASE WPI Section Ch, Week 200125 Derwent Publications Ltd., London, GB; Class B04, AN 2001-244800 XP002187244 -& WO 01 19986 A (YAMANOUCHI PHARM CO LTD) , 22 March 2001 (2001-03-22) SEQ ID NOs: 1 and 2 -----	1-19,22, 25-45,51

☐ Further documents are listed in the continuation of box C.☐ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

14 January 2002

Date of mailing of the international search report

07.05.02

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

ALCONADA RODRIG..., A

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/10436

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 18, 32, 34 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: **19,20,23,24**
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-44 (partially), 45, 51 (complete)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/US 01/10436

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-44 (partially) and 45 and 51 (complete)

A G-protein coupled receptor of SEQ ID NO:1 encoded by the polynucleotide of SEQ ID NO:7, host cells, transgenic organisms, method for recombinant expression, a method for detecting the GPCR of the invention, methods for treatment of a disease associated with decreased expression of the GPCR; method for screening of compounds that bind to the GPCR; method for screening of compounds that modulates the activity of the GPCR; method for screening for a compound that alters the expression of a target nucleotide; a method for assessing toxicity of a compound that result in an altered expression of the GPCR; diagnostic tests and antibodies.

2. Claims: 1-44 (partially) and 46 and 52 (complete)

As invention 1, but referred to the GPCR of SEQ ID NO:2 encoded by the polynucleotide of SEQ ID NO:8.

3. Claims: 1-44 (partially) and 47 and 53 (complete)

As invention 1, but referred to the GPCR of SEQ ID NO:3 encoded by the polynucleotide of SEQ ID NO:9.

4. Claims: 1-44 (partially) and 48 and 54 (complete)

As invention 1, but referred to the GPCR of SEQ ID NO:4 encoded by the polynucleotide of SEQ ID NO:10.

5. Claims: 1-44 (partially) and 49 and 55 (complete)

As invention 1, but referred to the GPCR of SEQ ID NO:5 encoded by the polynucleotide of SEQ ID NO:11.

6. Claims: 1-44 (partially) and 50 and 56 (complete)

As invention 1, but referred to the GPCR of SEQ ID NO:6 encoded by the polynucleotide of SEQ ID NO:12.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/US 01/10436

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 19,20,23,24

Present claims 20, 21, 23 and 24 relate to a compositions and to their use in a method of treatment, wherein said compositions are defined by reference to a desirable characteristic or property, namely, that they have been identified by the screening method of claim 19 (for claims 20 and 21) and of claim 22 (for claims 23 and 24). The claims cover all compositions having this characteristic or property, whereas the application does not provides support within the meaning of Article 6 PCT neither disclosure within the meaning of Article 5 PCT for any of such compositions. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the composiotios by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has not been carried out for those claims.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/10436

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0119986 A	22-03-2001	AU 7312100 A WO 0119986 A1	17-04-2001 22-03-2001
